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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/507,955	02/22/2000	John D. Begin	60314-133	2813

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EXAMINER

NGUYEN, PHUNG

ART UNIT PAPER NUMBER

2632

DATE MAILED: 09/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.	Applicant(s)	
09/507,955	BEGIN ET AL.	
Examiner	Art Unit	
Phung T. Nguyen	2632	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-19 and 21-32 is/are rejected.
- 7) ☒ Claim(s) 20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. In view of the Appeal Brief filed on 05/23/05, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 3, and 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lowe et al. in view of Geschke et al. [U.S. Pat. 5,661,651].

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**Regarding claim 1:** Lowe et al. disclose a transponder system for reporting the distance traveled by a wheeled vehicle comprising a wireless transmitter 28 generating a wireless signal indicative of a vehicle displacement; and a wireless receiver 26 receiving the wireless signal from the transmitter (figure 2, col. 3, lines 5-37). Lowe et al. do not show the transmitter including a power source and periodically generating a wireless signal as claimed. Geschke et al. disclose wireless vehicle parameter monitoring system comprising power supply circuit 24 and the transmitter periodically transmits the wireless signal (fig. 2, col. 3, lines 45-50). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Lowe et al. and Geschke et al. because they both teach a sensor which is mounted directly on the wheel. The teaching of Geschke et al. would increase the flexibility of the Lowe et al. system by having the monitoring device including power source.

**Regarding claims 2 and 3:** Lowe et al. disclose the transmitter 28 is mounted on a rotating component of a vehicle (col. 3, lines 2-4).

**Regarding claim 7:** Lowe et al. disclose the transmitter 28 (figure 2, col. 3, lines 5-28) generating an RF signal.

**Regarding claims 8 and 9:** Lowe et al. disclose the sensor 30 (figure 2, col. 3, lines 51-67) for generating a signal indication of the number of wheel rotation. Lowe et al. do not show the fixed number of beacon signal is one as claimed. However, it would have been an obvious design choice to have the transmitter generating beacon signal once for each revolution. Note that the system of Lowe et al. is capable of counting revolution, storing the revolution count information, and transmitting revolution count information.

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**Regarding claim 10:** Lowe et al. disclose the transmitter 28 (col. 2, lines 62-67, and col. 3, lines 1-18) generating a modulated RF signal indicative of vehicle displacement.

4. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lowe et al. in view of Geschke et al. and further in view of Huang [U.S. Pat. 6,175,302]

**Regarding claim 5:** Geschke et al. teach the power supply circuit 24 as shown in figure 2 but the combination does not teach the power source generates power based upon motion as claimed. However, Huang discloses a tire pressure indicator including pressure gauges that have a self-generating power capability comprising the power source generates power based upon motion (col. 3, lines 47-63). Therefore, it would have been obvious to the skilled artisan to utilize the teaching of Huang in the system of the Lowe et al. and Geschke et al. because using the rechargeable battery would be an advantage.

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lowe et al. in view of Geschke et al. and further in view of Miller et al. [U.S. Pat. 4,694,295]

**Regarding claim 6:** Lowe et al. disclose the transmitter 28 (figure 1, col. 3, lines 28-37) for generating a signal. The combination fails to disclose the transmitter generating an acoustic signal. However, Miller et al. disclose a vehicle blind spot detector comprising the transducer 22 (figure 2, col. 4, lines 7-18) including a piezo-electric element for generating an acoustic signal. Therefore, it would have been obvious to the skilled artisan to use the readily piezo-electric element of Miller et al. in the system of Lowe et al. and Geschke et al. for generating the acoustic signal.

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6. Claims 11, 12, 15-18, and 21-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lowe et al. in view of Geschke et al. and further in view of Davis et al. [U.S. Pat. 5,177,685].

**Regarding claim 11:** Lowe et al. disclose a transponder system for reporting the distance traveled by a wheeled vehicle comprising a wireless transmitter 28 generating a wireless signal indicative of a vehicle displacement; and a wireless receiver 26 receiving the wireless signal from the transmitter (figure 2, col. 3, lines 5-37). Lowe et al. do not show the transmitter periodically generating a wireless signal as claimed. It is seen that whether the transmitter continuously or periodically transmits the wireless signal is old and known in the art. Furthermore, Geschke et al. disclose wireless vehicle parameter monitoring system comprising a transmitter periodically transmits the wireless signal (col. 3, lines 45-50). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Lowe et al. and Geschke et al. because they both teach a sensor which is mounted directly on the wheel. The teaching of Geschke et al. of periodically transmitting the wireless signal would enhance the system of Lowe et al. by saving power.

Lowe et al. disclose means 28 for generating a wireless signal indicative of rotational displacement; and a wireless receiver 26 receiving the wireless signal (figure 2, col. 3, lines 5-37). The combination does not disclose means for determining displacement of a vehicle based upon the wireless signal. However, Davis et al. disclose an automobile navigation system using real time spoken driving instructions comprising position keeping (col. 11, lines 17-68, and col. 12, lines 1-28) for determining position of a vehicle based upon the wireless signal. Therefore, it

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would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teaching of Davis et al. in the device of Lowe et al. and Geschke et al. in order to determine an absolute position of the motor vehicle because they teach a system for determining displacement of a vehicle.

**Regarding claim 12:** Lowe et al. disclose the transmitter 28 is mounted on a rotating component of a vehicle (col. 3, lines 2-4).

**Regarding claim 15:** Lowe et al. disclose the transmitter 28 (figure 2, col. 3, lines 5-28) generating an RF signal.

**Regarding claims 16 and 17:** Lowe et al. disclose the sensor 30 (figure 2, col. 3, lines 51-67) for generating a signal indication of the number of wheel rotation. The combination fails to show the fixed number of beacon signal is one as claimed. However, it would have been an obvious design choice to have the transmitter generating beacon signal once for each revolution. Note that the system of Lowe et al. is capable of counting revolution, storing the revolution count information, and transmitting revolution count information.

**Regarding claim 18:** Lowe et al. disclose the transmitter 28 (col. 2, lines 62-67, and col. 3, lines 1-18) generating a modulated RF signal indicative of vehicle displacement.

**Regarding claim 21:** Lowe et al. fail to disclose means for calibrating the wireless signal to the vehicle displacement while the vehicle is moving. However, Davis et al. teach that the position system with no error could be calibrated when installed and some dead reckoning systems recalibrate themselves to eliminate systematic errors (map matching) as shown in figure 1, col. 12, lines 32-62. Therefore, it would have been obvious to the skilled artisan to utilize the

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teaching of Davis et al. in the system of the combination for comparing the actual signal with a standard.

**Regarding claim 22:** Lowe et al. do not disclose means for dead-reckoning a position of a vehicle based upon the wireless signal. However, Davis et al. disclose the dead-reckoning (col. 11, lines 45-48) for estimating the current position of the vehicle. Therefore, it would have been obvious to the skilled artisan to use the readily dead-reckoning system of Davis et al. into the device of the combination in order to determine the position of a vehicle.

**Regarding claim 23:** Lowe et al. disclose means 28 for generating a wireless signal indicative of rotational displacement; and a wireless receiver 26 receiving the wireless signal (figure 2, col. 3, lines 5-37). Lowe et al. do not disclose means for propagating a position of a vehicle based upon the wireless signal. However, Davis et al. disclose an automobile navigation system using real time spoken driving instructions comprising position keeping (col. 11, lines 17-68, and col. 12, lines 1-28) for determining position of a vehicle based upon the wireless signal. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teaching of Davis et al. in the device of Lowe et al. in order to determine an absolute position of the motor vehicle because they both teach a system for determining displacement of a vehicle.

The combination does not show the transmitter including a power source and periodically generating a wireless signal as claimed. It is seen that whether the transmitter continuously or periodically transmits the wireless signal is old and known in the art. Furthermore, Geschke et al. disclose wireless vehicle parameter monitoring system comprising the power supply circuit 24 as shown in figure 2 and a transmitter periodically transmits the wireless signal (col. 3, lines 45-50).



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Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Lowe et al., Davis et al., and Geschke et al. because it would be an advantage to have the monitoring device including power source rather than relying on the external power source.

**Regarding claim 24:** Lowe et al. and Geschke et al. fail to disclose means for calibrating the wireless signal to the vehicle displacement while the vehicle is moving. However, Davis et al. teach that the position system with no error could be calibrated when installed and some dead reckoning systems recalibrate themselves to eliminate systematic errors (map matching) as shown in figure 1, col. 12, lines 32-62. Therefore, it would have been obvious to the skilled artisan to utilize the teaching of Davis et al. in the system of the combination for comparing the actual signal with a standard.

**Regarding claim 25:** Lowe et al. and Geschke et al. fail to disclose a database of roads, the position of the vehicle propagated relative to the database of roads. However, Davis et al. disclose the map database (col. 3, lines 54-56, and col. 12, lines 47-62). Therefore, it would have been obvious to one of ordinary skill in the art to utilize the teaching of Davis et al. in the system of the combination for estimating the position of a vehicle based on the assumption that the vehicle always on a street present in the map.

**Regarding claim 26:** Lowe et al. and Geschke et al. do not disclose means for dead-reckoning a position of a vehicle based upon the wireless signal. However, Davis et al. disclose the dead-reckoning (col. 11, lines 45-48) for estimating the current position of the vehicle. Therefore, it would have been obvious to the skilled artisan to use the readily dead-reckoning

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system of Davis et al. into the device of Lowe et al. and Geschke et al. in order to determine the position of a vehicle.

**Regarding claim 27:** Lowe et al. disclose means for generating a wireless signal counts rotations of a vehicle wheel (col. 3, lines 51-54)

**Regarding claim 28:** The combination does not show means for calibrating rotations of the vehicle wheel to displacement of the vehicle as claimed. However, it would have been an obvious design choice to have the calibrating rotations of the vehicle wheel to displacement of the vehicle in the automobile navigation system.

**Regarding claim 29:** All the claimed subject matter is already discussed in respect to claim 11 above.

**Regarding claim 30:** Refer to claim 21 above.

**Regarding claim 31:** Refer to claim 22 above.

**Regarding claim 32:** Davis et al. disclose the dead-reckoning the position of the vehicle is based upon the calibrated wireless signal (col. 11, lines 45-59, and col. 12, lines 58-62).

7. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lowe et al. in view of Davis et al. and Geschke et al. and further in view of Huang [U.S. Pat. 6,175,302].

**Regarding claim 13:** The combination does not show the power source generates power based upon rotation. However, Huang discloses the power source 20 generates power based upon motion (col. 3, lines 47-63). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teaching of Huang into the combination's system in order to have a self-provided power generating which is an advantage.

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8. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lowe et al. in view of Davis et al. and Geschke et al. and further in view of Miller et al. [U.S. Pat. 4,694,295].

**Regarding claim 14:** Lowe et al. disclose the transmitter 28 (figure 1, col. 3, lines 28-37) for generating a signal. The combination fails to disclose the transmitter generating an acoustic signal. However, Miller et al. disclose a vehicle blind spot detector comprising the transducer 22 (figure 2, col. 4, lines 7-18) including a piezo-electric element for generating an acoustic signal. Therefore, it would have been obvious to the skilled artisan to use the readily piezo-electric element of Miller et al. in the combination's system for generating the acoustic signal if desired.

9. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lowe et al. in view of Davis et al. and Geschke et al. and further in view of Maples [U.S. Pat. 4,833,281].

**Regarding claim 19:** The combination fails to show a mass movable relative to the vehicle part based upon motion, the wireless signal generated based upon motion of the mass. However, Maples discloses a motion detector comprising the mass in the form of ball 16 (figure 1, col. 1, lines 35-40, and col. 2, lines 18-32) movable relative to the vehicle part based upon motion. Therefore, it would have been obvious to the skilled artisan to use the technique of Maples into the system of the combination because of the compact design, thereby it would be an advantage.

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*Allowable Subject Matter*

10. Claim 20 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Conclusion*


11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


a. Eberwine et al. [U.S. Pat. 5,783,992] disclose time based low tire pressure warning sensor.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phung T Nguyen whose telephone number is 571-272-2968. The examiner can normally be reached on 8:00am-5:30pm Mon thru. Friday, with alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel J. Wu can be reached on 571-272-2964. The fax numbers for the organization where this application or proceeding is assigned are 571-273-8300 for regular communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2600.

  
DANIEL WU  
SUPERVISORY PATENT EXAMINER  
9/16/05

  
PHUNG T. NGUYEN  
PRIMARY EXAMINER

Date: September 15, 2005